Glossary of Terms

Commercial:
Dedicated Landscape Accounts:

Developed Landscape Area: All outdoor areas under irrigation and water features but excluding hardscape areas.

Energy Star:

High efficiency plumbing fixtures and fittings: Fixtures that are more efficient that the Energy Policy Act of 1992 standards and are defined in Section 1.0 for residential fixtures and Section 9.0 for commercial and industrial fixtures.

High Water Use Plants: Plants characterized by high transpiration rates, shallow rooting, the need for frequent watering during summer months or with exposure to hot and drying climatic conditions. (Local Units of Governments may wish to supplement this with a Plant List)

Landscape Plans: This includes a planting plan, an irrigation plan, and a grading plan drawn at the same scale and that clearly and accurately identify specified plants, irrigation layout, equipment, finish grades and drainage, specifications and construction details, plan sheet numbers and drawing date of plans.

Local Unit of Government: Any county or municipality having the ability to promulgate ordinances including those having enforceable penalties related to water use.

Low Water Use Plants: Plants that, generally, once established can survive on 2 irrigations per month during the summer months. (Local Units of Governments may wish to supplement this with a Plant List)

Non compliant plumbing fixtures and fittings: Fixtures that are less efficient than the Energy Policy Act of 1992 standards.

Overspray: Water that would be delivered by irrigation nozzles beyond the targeted landscape area during windless conditions onto any adjacent hardscapes or other non-landscaped areas during an irrigation cycle.

Rehabbed/Renovated:

Residential:

Runoff: Irrigation water that is not absorbed by the soil or landscape area to which it is applied and which flows onto other areas.

Turf: A mat layer of monocotyledonous plants with shallow rooting structures requiring frequent watering during the growing season.

Water Factor:

WaterSense:

Acronyms

ASME:
ASSE:
CSA:
EPA:
GPD:
GPF:
GPM:
PSI:

Residential -Indoors

1.0 Plumbing Fixtures and Fittings: Plumbing fixtures and fittings in all new and rehabbed construction shall not exceed the following flow rates and must be a labeled WaterSense product. The following flow rates shall at a minimum maintain alignment with the most current EPA WaterSense product specification standards for all items listed below.

1.0.1 Toilets. No water closet shall have a flush volume greater than 1.6 gallons per flush.

1.0.1.1 Gravity, Pressure Assist and Electro-Hydraulic Tank-type Toilets. All gravity, pressure assist and electro-hydraulic tank type toilets shall have a maximum effective flush volume of not more than 1.28 gallons of water per flush in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.19.14 and shall be listed to the EPA WaterSense Tank-Type High Efficiency Toilet Specification. Note: The effective flush volume for dual flush toilets is defined as the composite average flush volume of two reduced flushes and one full flush.

1.0.1.2 Flushometer-Valve Activated Toilets. All flushometer-valve activated toilets shall have a maximum flush volume of not more than 1.6 gallons per flush in accordance with ASME A112.19.2/CSA B45.1.

1.0.2 Lavatory Faucets. The maximum flow rate for lavatory faucets shall be 1.5 gallons per minute at 60 psi in accordance with ASME A112.18.1/CSAB125.1 and shall be listed to the EPA WaterSense High Efficiency Lavatory Faucet Specification.

1.0.3 Showerheads. The maximum flow rate for showerheads shall be 2.0 gallons per minute at 80 psi in accordance with ASME A112.18.1/CSA B125.1. The showerhead shall be supplied by an automatic compensating valve that complies with ASSE 1016 or ASME A112.18.1/CSA B125.1 and specifically designed for the flow rate of the showerhead being used.

Section 1.0 COMMENTARY

The residential section of this ordinance applies to single family homes, townhomes and multifamily units (i.e. condos, apartments, etc.).

This section provides maximum water usage figures for various plumbing fixtures and fittings. The figures represent a 20%-32% reduction in water use above the water use standards in the national Energy Policy Act of 1992 where applicable.

Fixture/Fitting	EPAct 1992 Standard	Ordinance Standard	% Reduction with Ordinance
Toilet	1.6 gpf	1.28 gpf	20%
Faucets	2.2 gpm/60 psi	1.5pgm/60 psi	32%
Showerheads	2.5 gpm/80 psi	2.0 gpm/80 psi	20%

gpf=gallons per flush
gpm-gallons per minute
psi=pounds per square inch

1.0.1 Toilets: Toilets typically account for 27% of total residential indoor water use and are often the single largest indoor user of water. High Efficiency Toilet (HET) replacement and utilization of dual flush toilets can produce substantial water savings particularly in older communities. High Efficiency Toilets use 1.28 gallons per flush or less. Typically dual flush toilets provide 1.6gpf for the full flush and 1.1 gpf for the reduced flush yielding a composite average flush volume of 1.27 gpf so that they are classified as High Efficiency Toilets. Flushometer-valve Activated Toilets may not apply to residential development in all communities endorsed by the EPA WaterSense program for the reduced rate (< 1.6 gpf) for commercial or residential use. Local decisions should be made as to what is appropriate for a specific community. Water Savings: By replacing a 3.5 gpf toilet with a High Efficiency Toilet (HET) using 1.28 gpf or less, an average household can save about 32 gallons a day or 11,500 gallons a year. Note: Savings represent a rehabbed household replacing a 3.5 gpf toilet, generally installed before 1994. Typically 1.6 gpf toilets are not replaced with HETs as it is not cost-effective.

1.0.2 Faucets: Faucets typically account for 16% of total residential indoor use. Most residential faucets are not self closing or metered. Therefore it is important to use high efficiency faucets and educate residents on associated water saving practices. Water Savings: By replacing a 2.2 gallon per minute faucet with a 1.5 gallon per minute faucet or aerator, an average household can save about 15 gallons per day or 5,500 gallons per year. Note: Savings represent a rehabbed household replacing a 2.2 gpm faucet, generally installed before 1994.

1.0.3 Showerheads: Showerheads typically account for 17% of total residential indoor use. Multiple showerheads per shower compartment are becoming more common in newer or more expensive housing. The number of showerheads not addressed in this model ordinance but local officials may wish to address it. Water Savings: By replacing a 3.0 gallon per minute showerhead with a 2.0 gallons showerhead, an average household can save about 15 gallons per day or 5,400 gallons a year. Note: Savings represent a rehabbed household replacing a 3.0 gpm showerhead, generally installed before 1994.

Note: Specific system and source water pressure can vary by community affecting flow rates.

In Practice:
Austin, TX: http://www.ci.austin.tx.us/watercon/downloads/WCTFPolicyDoc.pdf
Los Angeles: http://clkrep.lacity.org/onlinedocs/2009/09-0510_rpt_atty_4-30-09.pdf

Learn More: EPA WaterSense Program-Product Information:
http://www.epa.gov/watersense/pp/index.htm

2.0 Appliances: This section applies to all new and rehabbed construction.

2.0.1 Dishwashers. The maximum water factor for residential dishwashers shall be 5.8 and be EPA Energy Star rated.

2.0.2 Clothes Washers. Residential clothes washers shall comply with the EPA Energy Star program requirements and shall have a water factor of 5.0 or less.

Section 2.0 COMMENTARY

2.0.1 Dishwashers: Dishwashers typically account for 1% of total residential indoor use. Although this amount is relatively small when compared to other fixtures, efficient dishwashers use less water and less energy due to decreased hot water use for cleaning cycles. The requirements for Energy Star appliances addresses both water and energy usage.

2.0.2 Clothes washers: Clothes washers typically account for 22% of total indoor use. As with dishwashers, clothes washers can use a significant amount of energy as well. The requirements for Energy Star appliances addresses both water and energy usage. Most Energy Start clothes washers are front loading machines without a central agitator that allows clothes to tumble in a reduced amount of water. Applies to single family as well as to multifamily (apartment, condo, duplex) with in unit clothes washers. Multifamily residential laundry facilities will be addressed in the Commercial/Industrial/Institutional Indoor Section.

In practice:
Los Angeles: http://clkrep.lacity.org/onlinedocs/2009/09-0510_rpt_atty_4-30-09.pdf

Learn More:
Energy Star: http://www.energystar.gov/index.cfm?c=appliances.pr_appliances

3.0 Residential Retrofits:

3.0.1 Retrofit on Resale. All residential property owners, prior to change of ownership must certify that the structure has plumbing fixtures/fittings (toilets, faucets, and showerheads) that comply with the Energy Policy Act of 1992 standards. Noncompliant plumbing fixtures/fittings must be replaced with high efficiency plumbing fixtures/fittings (toilets, faucets, and showerheads) as defined in Section 1.0 Plumbing Fixtures in this ordinance. This applies to all residential property built prior to January 1, 1994.

3.0.2 Retrofit on Purchase. All residential property buyers within (X) days of change of ownership must certify that the structure has plumbing fixtures/fittings (toilets, faucets, and showerheads) that comply with the Energy Policy Act of 1992 standards. Noncompliant plumbing fixtures/fittings must be replaced with high efficiency plumbing fixtures/fittings (toilets, faucets, and showerheads) as defined in Section 1.0 Plumbing Fixtures in this ordinance. X=60-90 days. This applies to all residential property built prior to January 1, 1994.

3.0.3 Retrofit on Reconnection. All residential property buyers must attach appropriate verification that the structure has plumbing fixtures/fittings (toilets, faucets, and showerheads) that comply with the Energy Policy Act of 1992 standards. Noncompliant plumbing fixtures/fittings must be replaced with high efficiency plumbing fixtures/fittings (toilets, faucets, and showerheads) as defined in Section 1.0 Plumbing Fixtures in this ordinance when applying for new water service. This applies to all residential property built prior to January 1, 1994.

Section 3.0 COMMENTARY

A local government may choose one of the following three options outlined in the section: Retrofit on Resale, Retrofit on Purchase, or Retrofit on Reconnection. This basic principle on residential retrofits is to accelerate fixture and fitting replacement using existing processes such as the purchase and sale of a home. The options vary by responsible party (buyer or seller) and time of enforcement (before the sale, after the purchase or before reconnect).

Although similar ordinances have been carried in several cities and counties in the United States, it is important to note that each ordinance is designed for the specific community and no two ordinances are the same in scope or structure. Applicability, exemptions, and enforcement techniques need to be locally assessed for successful adoption.

Applicability can include but is not limited to the type of fixtures chosen, type/age of housing, ordinance effective date, replacement fixture rates, unincorporated or incorporated land, etc.
In Illinois, the Energy Policy Act of 1992 was enforced on 01/01/1994. Therefore any home built after this date is exempt from this section as water efficient fixtures/fittings are already standard. Other sample exemptions include: historical buildings, transfers within family, extreme economic hardship, foreclosures, eminent domain, teardowns, etc.

Compliance can be achieved by customer verification or through a site visit by municipal/utility representative. Often local governments or utilities that use customer verification (self submission of compliance form to appropriate entity) make available instructions to assist the customer on how to verify fixture/fitting flow rates and manufacture date which are generally stamped or engraved on fixtures and fittings manufactured after 1994 as a component of the Energy Policy Act of 1992.

Enforcement typically entails submission of a compliance form which can be included in Disclosure Forms. A sample form is in Appendix A. Penalties widely range but usually take form of increasing monetary fines with each violation. In some cases this section can also apply to commercial and industrial purchases with either the same or slightly modified conditions.
Typically 1.6 gpf toilets are not replaced with HETs as it is not cost-effective.

Note:
Transfer of responsibility from buyer to seller is often used as an option for those local governments that choose 3.0.1 Retrofit on Resale. A sample Transfer of Responsibility Form is in Appendix A.

The Energy Policy Act of 1992 standards are outlined in Section 1.0 commentary.

<u>In practice:</u>
Retrofit on Resale: Santa Cruz County, CA
http://sccounty01.co.santa-cruz.ca.us/eh/Water_Resources/water_conservation.htm
Retrofit on Purchase: San Diego, CA
http://docs.sandiego.gov/municode/MuniCodeChapter14/Ch14Art07Division04.pdf
Retrofit on Reconnect: DeKalb County, GA
http://allianceforwaterefficiency.org/Water_Efficiency_Watch_May_-_June_2008.aspx?terms=Dekalb#DeKalb

Residential -Indoors
Variances

- The Municipality may waive the requirements in Section 3.0 based on certain household characteristics such as extreme economic hardship, historical landmark designation, transfers within a family, foreclosures, eminent domain, teardowns, etc.

- Noncompliant faucets may be fitted with aerators to achieve reduced flow rate outlined in Section 1.0.2 Lavatory Faucets in lieu of full fixture replacement.

Residential - Landscape

4.0 Vegetation:

4.0.1 Turf Area and Location. The combined size of turf (plus other high water use plants) or other water features shall be limited to no more than X% of the total developed landscape area.

4.0.2 Planting. Residents are encouraged to use native plants and/or low water use plants.

Section 4.0 COMMENTARY

4.0.1 Turf Area Location

The local government may choose to decide on the optimum are (X% above) dedicated to turf, high water use plants or water features. Ordinances from elsewhere in the country range from 25- 35% of the total developed landscape area.

Developed Landscape Area refers to all outdoor areas under irrigation + water features. Hardscape areas are not included.

In Practice:

The Village of Winfield, IL prohibits the establishment of turf (planting of sod or seed) from July 1st through September 1st unless a permit has been issued by the Village Manager.
http://www.villageofwinfield.com/DocumentView.aspx?DID=98

4.0.2 Planting

Local governments may wish to publish a list of recommended plants to aid residents in planting schemes. The Shedd Aquarium has a list of native plants found at
http://sheddaquarium.org/greatlakes/files/native_plants_infosheets.pdf

Learn More:

EPA, Green Landscaping, Green Acres, Native Plant Fact Sheets, Illinois Resources:
http://www.epa.gov/greenacres/nativeplants/factsht.html#Native Plant
Marin Municipal Water District, CA: http://www.marinwater.org/documents/O385.pdf

5.0 Irrigation:

5.0.1 Landscape Irrigation Equipment. Any new system installed within the residential areas of the Municipality (for landscape areas > X acres) must be equipped with rain sensing devices and freeze gauges that shut off the systems and that are approved as to number and type by the Director of Public Works/Planning.

- Sprinkler heads must not spray into streets and sidewalks.
- Strips of land less than 6 feet in width shall be irrigated by drip, bubbler or micro irrigation systems.

Check valves must be installed at irrigation heads as needed to prevent low head drainage and puddling.

5.0.2 Landscape Irrigation Days. At even numbered addresses, landscape irrigation may occur only on Wednesday and Saturday. Odd numbered addresses may irrigate only on Thursday and Sunday.

5.0.3 Landscape Irrigation Schedules. Between the months of April through October, landscape irrigation shall not occur between 10:00 AM and 6:00 PM. Irrigation shall not continue beyond 2 hour per irrigation day nor more than ¾ inch during the allocated schedule**.**

5.0.4 Irrigation Permits: Residents may receive permits for the irrigation of new landscape to allow watering at any time of day on any day for the initial 30 days and every other day for the next 30 days for a total of one 60-day period.

Section 5.0 COMMENTARY

5.0.1 Landscape Irrigation Equipment: This requirement can be met if the local unit of government requires permits for the installation of automatic irrigation systems. The Local government can either decide on the threshold for requiring permits based on size of proposed development and of landscape areas or insert this section within the Landscape Ordinance, where available. The Local government may add additional requirements as it sees fit to prevent overspray and to insure that spray heads do not have overlapping spray.

5.0.2 Landscape Irrigation Days: Due to the amount of rain that falls in this region, irrigating landscapes bi-weekly should be sufficient for healthy lawns. (will refer to relevant research)
Local governments that already enact a Sprinkling Ordinance may choose to modify their ordinances accordingly.

5.0.3 Landscape Irrigation Schedules: See Irrigation Permits and Variances for other allowances.

5.0.4 Irrigation Permits: The permitting system provides relief for residents who wish to install new landscape that might require additional watering during the first stages of growth.

In Practice: The Village of Algonquin, IL has a Water Conservation Program that includes outside water use restrictions. Landscape watering is prohibited between the hours of 9:00 AM and 6:00 PM. Under certain conditions, outside watering is allowed on alternate days of the week, on alternate mornings or none at all.

6.0 Homebuilders: Homebuilders are required to offer a low water-consuming landscape option for any landscape proposals offered to homebuyers.

Section 6.0 COMMENTARY

It is more efficient to plant water-efficient landscapes during the building phase than having to remove turf and installing low water consuming landscapes. Local units of government may wish to provide credits/expedited approval and permitting processes for developers who provide water efficient landscapes to the buyers.

7.0 Homeowner Associations: HOA must not require water intensive landscaping in their rules/regulations.

Section 7.0 COMMENTARY

The intent of this requirement is to insure that residents who are members of HOAs maintain the ability to implement water-efficient landscaping without undue HOA regulations that might prohibit this.
In Practice: The Sable Ridge Homeowners Association, FL, established guidelines consistent with the 'Florida Friendly Landscapes' for residences in their area. "Florida-friendly landscaping" means quality landscapes that conserve water, protect the environment, are adaptable to local conditions, and are drought tolerant. The principles of such landscaping include: planting the right plant in the right place, efficient watering, appropriate fertilization, mulching, attraction of wildlife, responsible management of yard pests, recycling yard waste, reduction of stormwater runoff, and waterfront protection. Additional components include practices such as landscape planning and design, soil analysis, the appropriate use of solid waste compost, minimizing the use of irrigation, and proper maintenance.

Learn More: A complete document for the Sable Ridge guidelines can be found at http://sableridgehoa.com/document/5165851sable_ridge_florida_friendly_landscape_guidelines--final_draft.pdf?6623

Residential Ordinance- Landscape Variances

- The Municipality may waive the above requirements if presented with compelling evidence that the site is not suitable for the recommended plantings.
- The requirement for turf and high water use plants, does not apply where the developed landscape areas are less than 1,000 square feet. In areas where irrigation is done from recycled water-rainwater, the combined size of the turf areas and swimming pools/water features shall be limited to no more than 40% of the total developed landscape area.
- Irrigation using a micro-spray, micro-jet, drip, bubbler system, soaker hose, hand-held hose equipped with an automatic shut-off nozzle is allowed anytime and on any day.
- The use of water for irrigation from a recycled water system is allowed with no constraints on irrigation schedules. Recycled system components shall be identified as non-potable water sources.
- The use of discharge water from a water-to-air air-conditioning unit or other water-dependent cooling system is not limited under the requirements of this ordinance.

Commercial/Industrial/Institutional -Indoors

8.0 Plumbing Fixtures and Fittings: Plumbing fixtures and fittings in all new and remodeled construction shall not exceed the following flow rates and must be a labeled WaterSense product. The following flow rates shall at a minimum maintain alignment with the most current EPA WaterSense product specification standards for all items listed below.

8.0.1 Toilets. No toilet shall have a flush volume greater than 1.6 gallons per flush.

8.0.1.1 Gravity, Pressure Assist and Electro-Hydraulic Tank-type Toilets. All gravity, pressure assist and electro-hydraulic tank type toilets in light commercial locations shall have a maximum effective flush volume of not more than 1.28 gallons of water per flush in accordance with ASME A112.19.2/CSA B45.1 or ASME A112.19.14 and shall be listed to the EPA WaterSense Tank-Type High Efficiency Toilet Specification. Note: The effective flush volume for dual flush toilets is defined as the composite average flush volume of two reduced flushes and one full flush.

8.0.1.2 Flushometer-Valve Activated Toilets. All flushometer-valve activated water closets shall have a maximum flush volume of not more than 1.6 gallons per flush in accordance with ASME A112.19.2/CSA B45.1.

8.0.2 Urinals. Urinals shall have a maximum flush volume of not more than 0.5 gallon of water per flush in accordance with ASME A112.19.2/CSA B45.1 or IAPMO Z124.9

8.0.3 Public or Public Use Lavatory Faucets. Lavatory faucets installed in bathrooms of buildings or occupancies other than residences and apartments must be self closing or metering faucets and comply with the flow rates below. Private bathrooms in hotels are an exception and shall have a maximum flow rate of 1.5 gallons per minutes at 60 psi in accordance with ASME A112.18.1/CSA B125.1 and shall be listed to the EPA WaterSense High-Efficiency Lavatory Faucet Specification.

Self Closing Faucets. The maximum flow rate shall be 0.5 gallon per minute at 60 psi in accordance with ASME A112.18.1/CSA B125.1.

Metering Faucets. Metering faucets shall deliver not more than 0.25 gallons of water per cycle.

8.0.4 Showerheads. The maximum flow rate for showerheads shall be 2.0 gallons per minute at 80 psi in accordance with ASME A112.18.1/CSA B125.1. The showerhead shall be supplied by an automatic compensating valve that complies with ASSE 1016 or ASME A112.18.1/CSA B125.1 and specifically designed for the flow rate of the showerhead being used. This does not apply to emergency safety showers and emergency eye wash stations.

8.0.5 Commercial Pre-rinse Spray Valves. The maximum flow rate for a pre-rinse spray valve installed in a commercial kitchen to remove food waste from cookware and dishes prior to cleaning shall be 1.6 gallons per minute at 60 psi. Where pre-rinse spray valves with maximum flow rates of 1.3 gallons or less are installed, the minimum static pressure shall be 30 psi. Commercial kitchen pre-rinse spray valves shall be equipped with an integral automatic shut off.

Section 8.0 COMMENTARY

This section provides maximum water usage figures for various plumbing fixtures and fittings. The water usage figures represent a 20%-50% reduction in water use above the water use standards in the national Energy Policy Act of 1992 where applicable.

Fixture/Fitting	EPAct 1992 Standard	Ordinance Standard	% Reduction with Ordinance
Toilet	1.6 gpf	1.28 gpf	20%
Urinal	1.0 gpf	0.5 gpf	50%
Faucets	2.2 gpm/60 psi	1.5 gpm/60 psi	32%
Showerheads	2.5 gpm/80 ps	2.0 gpm/80 psi	20%

gpf=gallons per flush
gpm=gallons per minute
psi=pounds per square foot

Improving commercial plumbing fixtures and fittings can save water in addition to potentially reducing the long-term operating costs for businesses.

8.0.1 Toilets: Currently the EPA does not have specifications for commercial flushometer-valve toilets most often found in higher public traffic locations such as airports, theaters, arenas, schools. However the EPA does include light commercial locations such as hotels and restaurants in their tank type High-efficiency Toilet Specification. A more extensive definition for light commercial may be developed by the Local government if desired. Signage is often needed to accompany the installation of dual flush HETs in light commercial settings to help ensure the fixture is used properly and expected water savings are achieved.

8.0.2 Urinals: Waterless urinals were not included in this model ordinance but may be in the future as education and technology advance.

8.0.3 Public or Public Use Lavatory Faucets: Flow rates can be achieved by fixture replacement or retrofit (i.e. aerators). Private bathrooms in hotels are generally used similar to private residential bathrooms and therefore are held to the same standard as outlined in Residential Indoor Section 1.0.2.

8.0.4 Showerheads: This applies to but is not limited to hotels, motels, and locker rooms (e.g. schools, private and public gyms, etc).

8.0.5 Commercial Pre-rinse Spray Valves: The EPA WaterSense program is currently developing performance specification for High-Efficiency Pre-rinse Spray Valves. The EPA estimates that replacing an outdated pre-rinse spray valve with a more efficient valve can save between 6,400 to 20,000 gallons per pre-rinse spray valve per year. The pre-rinse spray valve standard (1.6 gpm/60 psi) was set in the Energy Policy Act of 2005 and is reflected in the ordinance.

Water Savings:
Water Savings from ordinances for commercial and industrial accounts will be heavily dependent on specific facility characteristics. Water savings can be substantial, especially in more water-intensive businesses such as restaurants and hotels. Toilet and faucet water savings can be expected to exceed residential savings (Residential-Indoor Commentary section 1.0.1 and 1.0.2) assuming increased use per fixture/fitting. Showerheads, assumed to mainly be used in hotels, may have similar water savings as

the residential showerhead water savings documented in Residential-Indoor Commentary section 1.0.3. Replacing a 3 gallon/minute pre-rinse spray valve with a 1.6 gallon/minute fitting will save 180 gallons for 3 hours of use and save between $900 and $1050 a year in water, sewer and heating costs.

In Practice:
Los Angeles: http://clkrep.lacity.org/onlinedocs/2009/09-0510_rpt_atty_4-30-09.pdf
Miami-Dade County:
http://www.miamidade.gov/conservation/library/WUE_standards_manual_final.pdf

Learn More: WaterSense Products: http://www.epa.gov/watersense/pp/index.htm
Food Service Technology Center, pre-rinse spray valves:
http://www.fishnick.com/equipment/sprayvalves/

9.0 Appliances: Applies to all new and rehabbed construction.

9.0.1 Dishwashers. The maximum water factor for commercial dishwashers shall comply with the EPA Energy Star Program requirements.

9.0.2 Clothes Washers. Clothes washers installed in public use applications shall have a Water Factor of 8.0 (or less).

Section 9.0 COMMENTARY

2.0.1 Dishwashers: Energy Star dishwashers use 31% less energy and 33% less water than standard models and apply advanced technology to improve performance.

2.0.2 Clothes Washers: Generally applies but is but not limited to laundry mats. Many clothes washers with a Water Factor of 8.0 or less also qualify as Energy Star commercial clothes washers. Most Energy Star clothes washers are front loading machines without a central agitator that allows clothes to tumble in a reduced amount of water while using less energy. Applies to commercial and institutional laundry mats, mulitifamily residences (apartments, condos, duplexes) with shared laundry facilities, dorms, salons, etc.

In Practice:
Portland, Oregon, Proposed Commercial Code Change 06/09/09
http://www.portlandonline.com/bds/index.cfm?c=48074&a=249766

Learn more:
Energy Star, Dishwashers. http://www.energystar.gov/index.cfm?c=dishwash.pr_dishwashers
Energy Star, Clotheswashers. http://www.energystar.gov/index.cfm?c=clotheswash.pr_clothes_washers

10.0 Water recycling systems in Commercial Facilities: All new commercial car-wash and laundry facilities shall be equipped with a water recycling system. All existing commercial car-wash and laundry facilities shall be equipped with such water recycling systems when existing systems are replaced.

Section 10.0 COMMENTARY

Commercial car-wash facilities have high water use requirements. Recycling systems in these facilities are feasible, and many newer installations are equipped in this way in their original design. This was intended to include both conveyor and in bay commercial car-wash systems. This is already a requirement of the Illinois Division of Water Resources in connection with Lake Michigan water allocation permits.

In commercial laundry facilities, a water recycling system is one way to reduce potable water use. However other options can be considered on a community by community basis. Likewise replacing existing systems with recycling systems may not be feasible in all cases due to current building structure, and water quality issues to name a few. A local government needs to decide the types of facilities are appropriate for water recycling systems based on local conditions. For more information reference the Alliance for Water Efficiency in the "Learn more" section below.

In Practice: Metropolitan Water District of Southern California, Model Water Conservation Ordinance
http://www.centralbasin.org/brochures/ordinance_MWDSC-Model-Water-Conservation.pdf
Oxnard, CA.
http://publicworks.cityofoxnard.org/Department.aspx?DepartmentID=14&DivisionID=99&ResourceID=742

Learn More: Alliance for Water Efficiency, Commercial Laundry.
http://www.allianceforwaterefficiency.org/commercial_laundry.aspx

11.0 Eating and Drinking Establishments:

11.0.1 Drinking water. Drinking water shall be served only upon request in public and private eating and drinking establishments including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink is served and/or purchased. Establishments shall clearly communicate this to customers through table tents, a note listed on the menu or clearly visible signage.

11.0.2 Pre-rinse spray valves. All establishments that serve food must install a pre-rinse spray value as outlined in Section 8.0.5.

Section 11.0 COMMENTARY

The purpose of this section is to limit water waste in food and beverage related establishments and mainly applies to commercial establishments

11.0.1 Drinking water: Reducing potable water use in eating and drinking establishments can decrease utility bills and reduce commercial water waste.

In Practice:
Claremont, California. http://www.ci.claremont.ca.us/download.cfm?ID=26446
Las Vegas, NM. http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%2001-14.pdf
Santa Fe, NM. http://www.santafenm.gov/index.aspx?NID=1295

11.0.2 Pre-rinse spray valves: This expands on Section 8.0 of this ordinance to include existing food establishments as well. Given the frequency of dishwashing in a food establishment, replacement of all pre-rinse spray valves to efficient spray valves described above could yield notable water savings. Often local government will provide free or discounted efficient pre-rinse spray valves to local businesses. Ultimately local government should decide on the applicability and range of these ordinances to fit the needs of the community.

In Practice:
Manhattan Beach, CA: http://www.citymb.info/Index.aspx?page=1672
Ocean City, NJ: http://www.amwater.com/files/Conservation%20Program%20Direct%20Mailer.pdf

Learn More: Lakewood, CO: http://www.wapa.gov/es/pubs/fctsheet/PreRinseValves.pdf

12.0 Ice Machines: Ice machines shall be air cooled and shall comply with the US EPA Energy Star for Commercial Ice Machines.

Section 12.0 COMMENTARY

Energy Star Commercial ice machines are 15% more energy efficient and 10% more water efficient than standard machines and can save businesses over $100 a year on water and energy utility bills.

Water Savings: Savings will vary on use but on average business reduce energy use by 1,160 kWh and 2,700 gallons per year.

In Practice:
East Bay Municipal Utility District:
http://www.ebmud.com/services/account_information/new_service/regulations/water_efficiency_requirements.pdf
City of Austin: http://www.ci.austin.tx.us/watercon/downloads/EquipmentGuide.pdf

Learn More: Energy Star, Ice Machines
http://www.energystar.gov/index.cfm?c=comm_ice_machines.pr_crit_comm_ice_machines
http://www.energystar.gov/ia/partners/prod_development/new_specs/downloads/ice_machines/Ice_Machine_Decision_Memo.pdf

13.0 Commercial, Industrial and Institutional Retrofits:

13.0.1 Retrofit on Resale. All commercial, institutional and industrial property owners, prior to change of ownership must certify that the structure has plumbing fixtures/fittings (toilets, urinals, faucets, and showerheads) that comply with the Energy Policy Act of 1992 standards. Noncompliant plumbing fixtures must be replaced with high efficiency plumbing fixtures/fittings (toilets, urinals, faucets, and showerheads) as defined in Section 8.0 Plumbing Fixtures in this ordinance. This applies to all commercial and industrial property built prior to January 1, 1994.

13.0.2 Retrofit on Purchase. All commercial and industrial property buyers within (X) days of change of ownership must certify that the structure has plumbing fixtures/fittings (toilets, urinals, faucets, and showerheads) that comply with the Energy Policy Act of 1992 standards. Noncompliant plumbing fixtures must be replaced with high efficiency plumbing fixtures/fittings (toilets, urinals, faucets, and showerheads) as defined in Section 8.0 Plumbing Fixtures in this ordinance. X=60-90 days. This applies to all commercial and industrial property built prior to January 1, 1994.

13.0.3 Retrofit on Reconnection. All commercial and industrial property buyers must attach appropriate verification that the structure has plumbing fixtures/fittings (toilets, urinals, faucets, and showerheads) that comply with the Energy Policy Act of 1992 standards. Noncompliant plumbing fixtures must be replaced with high efficiency plumbing fixtures/fittings (toilets, urinals, faucets, and showerheads) as defined in Section 8.0 Plumbing Fixtures in this ordinance when applying for new water service. This applies to all commercial and industrial property built prior to January 1, 1994.

Section 13.0 COMMENTARY

It should be noted that all commercial gravity tank-type toilets and flushometer valve toilets did not comply with 1.6 gallons per flush standard until January 1, 1997. Thus a commercial retrofit ordinance could apply to structures built before 1997 as opposed to 1994 with residential retrofits. A local government may choose to have separate ordinances to address this discrepancy. However, it is common to address commercial, industrial and residential retrofits together as seen in examples referenced in Section 3.0 of this ordinance. Qualifying dates are not always included in these ordinances but dates service the purpose of selecting out the appropriate structures. For consistency, 1994 is used for this section. The Energy Policy Act of 1992 standards are outlined in the Section 8.0 commentary.

Often local governments or utilities that use customer verification (self submission of compliance form to appropriate entity) make available instructions to assist the customer on how to verify fixture/fitting flow rates and manufacture date which are generally stamped or engraved on fixtures and fittings manufactured after 1994 as a component of the Energy Policy Act of 1992.

Section 3.0 commentary contains more relevant information.

In Practice: All of the examples outlined in the Residential Retrofits Section 3.0 include commercial property and/or industrial property as well.

Commercial/Industrial/Institutional -Indoors Variances

- The Municipality may waive the requirements in Section 13.0 based on certain property characteristics such as historical landmark designation, foreclosures, eminent domain, teardowns, etc.

- Noncompliant faucets may be fitted with aerators to achieve reduced flow rate outlined in Section 8.0.3 Public or Public Use Lavatory Faucets in lieu of full fixture replacement.

Commercial/Industrial/Institutional – Landscape

14.0 Vegetation:

14.0.1 Soil Depth. Areas planted with turf grass shall have a minimum of 6 inches of topsoil depth. The soil shall be blended with compost in 27/25% ratio of soil to compost which shall be incorporated in the top 2 inches of the native soil.

14.0.2 Planting: All new commercial development with proposed landscaped areas greater than X square feet shall use native and/or non water intensive planting. Turf planting and high water use plants shall not exceed X% of the landscaped area. Strips of land less than 15 feet in width and planting beds shall be irrigated by low flow or spray irrigation using low angle spray nozzles.

Section 14.0 COMMENTARY

14.0.1 Soil Depth: Compost refers to decaying organic matter, such as leaves or grass clippings, used to improve soil structure.

In Practice: The City of Leander, TX has a similar soil depth requirement.
Learn More: http://www.leandertx.org/pdfs/WaterConservationOrdinance03.15.2007.pdf

14.0.2 Planting: The Local government may consider a more detailed classification of commercial uses and the maximum allowed percentage (X) of turf planting. The Local government may choose to publish an approved plant list to guide businesses in their choice of planting.

In Practice: The City of Leander, TX amended its Landscape Ordinance in March 2007 to include water conservation measures that described landscape requirements

Learn More: http://www.leandertx.org/pdfs/WaterConservationOrdinance03.15.2007.pdf

15.0 Irrigation:

15.0.1 Landscape Irrigation Days: At commercial accounts, landscape irrigation may occur only on Tuesdays and Fridays.

15.0.2 Landscape Irrigation Equipment. See section 5.0.1 in Residential-Outdoor. In addition, and for commercial/industrial accounts, applicants are required to submit a water use plan that addresses the measures taken to minimize evaporation loss of water from landscaped areas, utilization of low water using plants and use of non-potable water for irrigation.

Section 15.0 COMMENTARY

15.0.1 Landscape Irrigation Days: Communities that receive Lake Michigan water are required to have restrictions on landscape irrigation in accordance with their water use permits. This requirement should be applied in all communities in the northeastern Illinois region as it reduces water lost due to evaporation and thus provides for more efficient irrigation.

In Practice: The Village of Sugar Grove, IL enacts a water conservation ordinance that specifies the Permitted Hours of Water Use as "a time period between six o'clock (6:00) A.M. and nine o'clock (9:00) A.M. and between six o'clock (6:00) P.M. and nine o'clock (9:00) P.M." The Village also implements an even/odd watering days schedule.

Learn More: The Village of Sugar Grove Ordinance language can be found at http://www.sterlingcodifiers.com/codebook/index.php?book_id=606

15.0.2 Landscape Irrigation Equipment: The Local government shall decide on what size development shall require the permits.

16.0 Water Budgets: The Municipality shall require dedicated landscape accounts to devise maximum annual water allotments that their facilities require. This water budget will be calculated as follows:

1. Multiply total acres of turfed area by 4.9 feet
2. Multiply total acres of newly turfed area by 1.0 feet
3. Multiply total acres of water surface by 6.2 feet
4. Multiply total acres of low water use landscape area by 1.5 feet

The sum of the above shall be the annual water budget for the facility. Dedicated landscape accounts will pay an agreed rate for their water budget and a higher rate for more water usage.

Section 16.0 COMMENTARY

Water budgets can be calculated by various methods and the local unit of government may wish to use the method that is most suitable to its purposes.

In Practice:
The City of Phoenix uses this method to calculate water allotments/budgets. There is a separate budget for golf courses and local governments may wish to implement a similar approach.

Learn More:
Article IX, Water Conservation Code, City of Phoenix, AZ
http://www.municode.com/resources/gateway.asp?pid=13485&sid=3

17.0 Reporting: Dedicated landscape accounts shall provide a report on an annual basis to the Municipality on facility water conservation practices. Such report will provide a detailed description of water conservation technologies, irrigation schedules and their connection to weather and soil conditions, plant type and topography.

Section 17.0 COMMENTARY

The local unit of government may wish to provide a questionnaire or a survey to the above mentioned accounts for ease of reporting. When difficult to implement, this requirement maybe added to existing ordinances, e.g. Landscape Ordinances, as part of permit requirements and approvals. In this case, rather than regular reporting, the enforcing agency might require to view the conditions stated in Section 17 above from applicants seeking permits or approvals and may ask for site inspection as part of the occupancy requirements.

In Practice:

Commercial/Industrial/Institutional - Landscape Variances

- Accounts that demonstrate their ability to provide 50% of their irrigation from recycled water via rainharvesting, e.g. rain barrels or cisterns, are waived from the water budget requirement.
- Areas with existing native vegetation that remain undisturbed, areas around the trunk of existing trees, shrub beds and wildscapes shall be exempt from the soil depth requirement.
- Detention and water quality ponds may not be counted towards the above landscape area requirements.

Water Waste

Water Waste is defined by but not limited to sections 18.0-25.0 found in the Water Waste Section of this model ordinance. Water Waste is the general misuse or inefficient use of potable water.

18.0 Public Use:

18.0.1 Hydrants. Unauthorized use of hydrants is prohibited. Authorization must be obtained from the city water department or utility.

Section 18.0 COMMENTARY

18.0.1 Hydrants: Unauthorized use of hydrants wastes water and can cause a drop in water pressure that can negatively affect fire departments ability to suppress fires. In addition, such uses can pose a safety issue when individuals are exposed to high water pressures and can damage underground water infrastructure.

In Practice: The Village of Sugar Grove, IL prohibits the opening or withdrawal of water from fire hydrants except by authorized personnel. Oak Lawn, IL: http://www.oaklawn-il.gov/Departments/Public-Works/Water/Fire-Hydrant-Use-Ordinance.aspx

19.0 Private Use:

19.0.1 Leakages. Leaks for private water lines must be fixed within X days of notification by water utility/or discovery of the leak. X=5-30 days. Leaks include but are not limited to a broken sprinkler head, a leaking valve, leaking or broken pipes or a leaking faucet.

19.0.2 Water Softeners. Actuation of regeneration of all water softeners shall be by demand initiation as opposed to a timer-based system.

19.0.3 Car Washing. Vehicles must be washed with a hose that has an automatic shut-off valve.

Section 19.0 COMMENTARY

19.0.1 Leakages: Leaks can be a major source of water waste. It is estimated that the average household loses 2,000-20,000 gallons of water per year from leakage. Resident may contact a professional plumber to assist in leak detection and repair. Some local governments offer free irrigation water audits to detect leaks and offer solutions.
In Practice: Austin, TX: http://www.ci.austin.tx.us/watercon/waste.htm, http://www.ci.austin.tx.us/watercon/leakdetection.htm

Free audit: http://www.ci.austin.tx.us/watercon/irrigation.htm
Learn More: Alliance for Water Efficiency: Leaks:
http://www.allianceforwaterefficiency.org/Household_Leaks.aspx

19.0.2 Water Softeners: This ordinance section is applicable to communities where well water is the water source, and household water softening units are needed or in use. In Practice: New Holstein, WI http://www.nhutilities.org/customer_services/default.asp?CategoryNumber=6&SubcategoryNumber=2

19.0.3 Car Washing: This prevents excessive runoff that tends to flow over impervious areas, e.g. streets, sidewalks, etc.
In practice: Aurora, IL http://www.aurora-il.org/publicworks/waterproduction/conservation.php

20.0 Water Meters: The Municipality shall require that all new water services be metered. In addition existing non-metered services shall be metered in conjunction with a structure remodel.

Section 20.0 COMMENTARY

This ordinance section is appropriate for adoption in communities where universal metering is not already being practiced. Universal metering allows utilities to track water use, collect volume-based revenue, track conservation efforts and monitor leaks. Ideally every connection would be metered. Newer communities generally are almost if not completely metered whereas older communities may need to invest in universal metering programs. Additionally some local governmentsVolunteer metering programs can also be implemented to help accelerate metering installation in older communities in addition to this ordinance. Lake Michigan permittees, as a condition of permit, must meter all new connections and meter existing nonmetered services as part of any major renovation.
In practice: Chicago, IL, Meter Save Program https://www.metersave.org/
Learn more:
http://www.allianceforwaterefficiency.org/Metering_and_Submetering_Library_Content_Listing.aspx

21.0 Impervious Areas:

21.0.1 Impervious Watering. No person shall knowingly permit the irrigation of a landscape on premises owned, leased, or managed by the person in a manner that causes a substantial amount of water to fall upon impervious areas (sidewalks, driveways, streets, gutters or ditches).

21.0.2 Impervious Washing. No person shall wash impervious areas (sidewalks, driveways, streets, etc.) with water except in emergencies to remove spills of hazardous materials or eliminate dangerous conditions.

Section 21.0 COMMENTARY

Impervious areas such as sidewalks, driveways, streets, gutters and paved ditches do not allow water to infiltrate the ground at the point of contact. Alternatively these areas create runoff, often picking up debris and pollutants along their way to the sewer system and afterwards the wastewater treatment plant. The speed and quantity at which runoff is introduced to sewer systems can cause flooding in certain areas leading to environmental and personal property damage. Prohibiting watering and washing of impervious areas can help to mitigate these issues in a community and eliminate one source of water waste. Overwatering often resulting in impervious watering and is addressed in Sections 5.0 and 15.0 of this ordinance.

In Practice:

22.0 Installation: Water-conserving fixtures and fittings shall be installed in strict accordance with the manufacturers' instructions to maintain their rated performance.

Section 22.0 COMMENTARY

In order to achieve the intended water savings, fixtures and fittings need to be proper installed. In certain cases, improper installation can lead to an increase in water use. In addition local governments require certain fixtures and fittings to be installed by a licensed plumber. However, these requirements will vary throughout the region. This should be considered by the implementing local government when adopting a water conservation ordinance. This section may need to be modified to include local rules and regulations.

In practice: Las Vegas, NM http://www.lasvegasnm.gov/WATER%20CONSERVATION%20082109.pdf

23.0 Decorative Water Features: All decorative water features (i.e. fountains, etc) shall recirculate water within the device.

Section 23.0 COMMENTARY

Recirculating or recycling decorative water features increase water efficiency while maintaining their intended purpose.

In Practice: Denver, Colorado. http://www.denverwater.org/OperatingRules/OperRules14/
Las Angeles, CA http://www.ladwp.com/ladwp/cms/ladwp012434.pdf
Fishers, IN http://www.fishers.in.us/egov/docs/1248971359_22094.pdf
Tucson, AZ http://www.ci.tucson.az.us/water/ord-7178.htm

24.0 Cooling Systems: Single pass cooling systems are prohibited.

24.0.1 Air Conditioning Systems. Closed system air conditioning is required in all new construction and remodels.

24.0.2 Air Cooled Models. Install air cooled models in lieu of water cooled models when possible in new construction and remodels.

Section 24.0 COMMENTARY

Single pass cooling systems are not an efficient use of potable water. Water used for cooling must be recycled or recirculated before discharging. Installing such system can be cost effective and save money in the long term. All Lake Michigan grantees, as a condition of permit, have to adopt an ordinance that requires the "installation of closed system air conditioning in all new construction and in all remodeling."

In practice: Las Angeles, CA http://www.ladwp.com/ladwp/cms/ladwp012434.pdf
Nevada State Water Plan
http://water.nv.gov/WaterPlanning/wat-plan/PDFs/pt3-1a.pdf
San Diego County Water Authority
http://www.sdcwa.org/manage/pdf/ordinances/Rincon.pdf

Learn more: Portland, OR http://www.portlandonline.com/water/index.cfm?c=30586&a=247444

25.0 Point-Of-Use Reverse Osmosis Water Treatment Systems: Reverse Osmosis Water Treatment Systems installed in residential occupancies shall be equipped with automatic shutoff valves to prevent water wasting whenever there is no call for producing treated water.

Section 25.0 COMMENTARY

This requirement is pertinent to residences that rely on private wells. When considering Point-of-Use (POU) technologies, many water systems and their customers face concerns about potential water losses related to typical POU devices. Reverse Osmosis (RO) units typically use two to four gallons of water to produce one gallon of drinking water. The fluctuation in efficiency is due to many factors that continually change within the RO system, including incoming water pressure, backpressure produced by the storage tank and age and condition of the RO membrane itself. This may result in a large amount of water wasted if the system is continually operating.

Learn More: The Arizona Department of Environmental Quality has a Point of Use Compliance Program Guidance document that can be viewed at
http://www.azdeq.gov/environ/water/download/pointofuse.pdf

General Water Waste COMMENTARY

Often local governments will have water waste hotlines and/or website for customers to anonymously report water waste violations outlined. Violators with them receive and warning or a fine associated with the violation as defined by the local water conservation/water waste ordinance.
In practice: Austin, TX: http://www.ci.austin.tx.us/watercon/waste.htm
San Antonio: http://www.saws.org/conservation/waterwaste/whatiswaste.cfm

Pricing

26.0 Pricing: The Municipality shall implement conservation pricing structures and economic incentives that encourage desirable water management practices. This is best achieved in the presence of timely billing based on metered usage. See Appendix X for a sample bill. (not included at this time)

Section 26.0 COMMENTARY

Conservation pricing structures include seasonal rates (higher per unit water rate during the peak usage summer months), uniform rates or increasing block rates in which the unit price of water increases as the quantity of water used increases. The Local government may choose to adopt the pricing structure most suitable to their situation.

In Practice:

The Village of Algonquin implements water conservation rates during the months of June, July and August when consumption charges are increased 3 times the combined rate per 1,000 gallons for all water consumed above 18,000 gallons. A survey by the Village in 2007 showed that only 8.7% of residents paid the surcharge. More information can be found at: http://www.co.mchenry.il.us/departments/waterresources/pdfDocs/AlgonquinWaterConservationProgram.pdf

The Village of Burr Ridge, IL adopted an increasing rate structure for residential accounts (effective March 1, 2008) that charges various rates for 3 tiers as follows:

Basic Water Consumption Charge: $3.10 per thousand gallons consumed
Second Tier 60,001- 80,000 gallons: $5.30 per thousand gallons
Third Tier in excess of 80,000: $6.90 per thousand gallons.

Education and Outreach

27.0 Education: The municipal department responsible for water supply and treatment shall make available educational materials that aim to increase awareness of the value of water and promote water efficiency measures. The department shall also inform the public and maintain a public education program about water conservation measures outlined in this ordinance.

Section 27.0 COMMENTARY

Education and Outreach programs are a necessary component to any water conservation/efficiency program. A successful education and outreach campaign can smooth a community's transition before, during and after the adaptation of a water conservation ordinance and inform residents on the importance of water to a community as well as to the residents' quality of life. Lake Michigan permittees, as a condition of permit, are required to develop and implement "public programs to encourage reduced water use."

In practice:
Las Vegas, NM
Current ordinance: http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%2001-14.pdf
Proposed update:
http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%20Suggested%20Changes%20_3_.pdf

Learn more:
Village of Algonquin, IL has a detailed outreach and education program to accompany its water conservation programs. Their marketing campaign included door hangers, brochures, and refrigerator magnets for residents. Direct mail pieces were sent to businesses about irrigation and drought tolerant plants. Every elementary school in the village was given a presentation about where their water comes from, water plant operations and water conservation tips. Outreach also include a "Who can save the most water" poster contest. http://www.algonquin.org/

28.0 Water Conservation Signage:

28.0.1 Public, Semi-Public and Government Restroom and Shower facilities. These facilities shall post no less than one water conservation sign in each restroom and shower facility. Each sign shall not be less than 8.5 by 11 inches in size and may either be a municipal-provided sign or a sign developed using municipal-provided text. Either format must cite this ordinance. Signage must be posted in a visible location within the facility.

28.0.2 Hotels, Motels and other Lodging Facilities. These facilities shall display a minimum of one a water conservation informational card or brochure in a visible location per guest room. Card or brochure may be municipal-provided or developed using municipal-provided text.

Section 28.0 COMMENTARY

Water conservation signage can be a part of an overall education/outreach and increases awareness about water conservation and efficiency practices at the source of water use.

28.0.2 Hotel, Motels and other Lodging Facilities: The informational card or brochure could also inform the guest about an option to reuse linens (towels and sheets) during the duration of their stay (assuming it is more than one night) to save the water and energy associated with linen cleaning.

In practice: Santa Fe, NM
http://www.santafenm.gov/index.aspx?NID=1295
Raleigh, NC
http://www.raleighnc.gov/portal/server.pt/gateway/PTARGS_0_2_105539_0_0_18/Stage_2_Water_Conservation_Ordinance-347.pdf

29.0 Water Conservation Literature Distribution:

29.0.1 Retail Plant Nurseries. Retail plant nurseries shall provide customers who purchased outdoor plants with municipal-provided low water use landscape literature at the time of sale. Labeling of low water use plants is also encouraged.

29.0.2 Landscape Contractors and Architects. Landscape contractors and architects shall provide prospective clients with municipal-provided low water use landscape literature and water efficient irrigation guidelines before presenting a service contract. Literature shall include but not limited to information on rain sensors, freeze gauges and cisterns.

29.0.3 Realtors, Attorneys, Banks and Other Closing Real Estate Transactions. These individuals or entities shall provide the purchasing party of a home, business or property with municipal-provided indoor and outdoor water conservation literature at the time of closing.

29.0.4 Municipal Departments. The municipality shall provide relevant indoor and outdoor water conservation literature to: 1) all persons applying for a building permit 2) all customers initiating new water service from a municipal-operated water utility.

Section 29.0 COMMENTARY

Literature distribution is can also be part of an overall education/outreach program and uses existing avenues as opportunities to inform residents about proper and efficient indoor and landscape water use. Information to be included on literature will be location/situation specific.

In practice: Las Vegas, NM
Current ordinance: http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%2001-14.pdf
Proposed update:
http://www.lasvegasnm.gov/Water%20Conservation%20Ordinance%20Suggested%20Changes%20_3_.pdf

Violations/Enforcement

30.0 Violations/Enforcement: For a first violation by any resident of the requirements of this ordinance, the Department/Municipality shall issue a written notice. For a second violation within the preceding twelve (12) calendar months, a surcharge in the amount of $125 shall be added to the customer's water bill. Each subsequent offense shall have a fine of $500. After a fifth or subsequent violation, the Department/Municipality may restrict water service to the customer following a hearing held by Department/Municipality where the customer has an opportunity to respond to Department/Municipality information. Full service may be restored no later than 48 hours after implementation of the action resulting in termination and payment of all charges.

Section 30.0 COMMENTARY

Local governments may choose the penalty structure most suitable for their situations.
Notice: the issued written notice must be posted at a conspicuous place on customer's premises or by US mail, first class, postage prepaid addressed to customer's billing address
Payment: customers can pay for violations within their water bill payments.
Dispute: customers may dispute any penalty levied pursuant to this section within (15-30 days) of issuance to the Department/Municipality or to a designated hearing officer.
Service restriction: …. (water required by customer to maintain an adequate level of public health and safety) more to be added

In Practice:
The Village of Sugar Grove, IL enacts a similar fining structure through the Village Code. More information can be found at:
http://www.sterlingcodifiers.com/codebook/index.php?book_id=606

The Village of Algonquin has a zero tolerance policy for water restrictions violations and fines range from $100- $300.

The Village of Homer Glen's water conservation ordinance outlines fines from $150 up to $750 for the third offense. http://www.homerglen.org/regulations/WaterConservationMeasures.htm